

**MATERIAL AND METHOD FOR ENGRAFTMENT OF A COMPOSITE  
BIOCOMPATIBLE SKIN GRAFT ON THE NEODERMIS OF ARTIFICIAL SKIN**

**ABSTRACT OF THE DISCLOSURE**

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5 Autologous cultured keratinocytes are grown on a biosynthetic and  
biocompatible substratum following pre-seeding with autologous or allogenic dermal  
fibroblasts. The resultant composite material may then be applied on the neodermis of  
artificial skin which had been previously engrafted on the patient. The composite material,  
and specifically Composite Biocompatible Skin Graft (CBSG) material comprises autologous  
keratinocytes and allogenic or autologous dermal fibroblasts grown on Laserskin. A method  
10 for cultivating the CBSG includes the application of dermal fibroblasts onto the substratum as  
a feeder layer and then the inoculation of autologous keratinocytes on the resultant structure.  
A method for engraftment comprises first applying an artificial skin with a protective  
silicone membrane on a wound area, thereby allowing vascularization; and following  
vascularization, removing the silicone membrane and engrafting the CBSG material onto the  
15 vascularized artificial skin.

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